

Attorney Docket No. CHEM-30134  
Application No. 10/600,810

Amendment and Response Accompanying  
Request for Continued Examination (RCE)

Remarks

Claims 1-17 and 20-21 are pending in the application. Claims 1-13 and 20 have now been canceled. Claims 18-19 were previously canceled. Claims 14 and 21 have been amended. New claims 22-36 have been added.

The Examiner had made a final rejection of all the pending claims in the Office Action of August 9, 2005.

Applicant certainly appreciates the courteous assistance given by the Examiner in the phone interview of October 13, 2005. Pursuant to the phone discussions, Applicant is requesting continued examination with respect to the present application.

Applicant has now canceled claims 1-13 and 20, which were directed to a fire fighting concentrate. Applicant has amended independent claim 14 for further consideration. Claims 15-17 and 21 were presented previously and remain dependent upon newly amended independent claim 14.

New claims 22-36 have also been added. New claims 22-28 are dependent upon independent claim 14. New independent claim 29 is similar to presently amended independent claim 14, but further specifies that the coordinating salt is a polyvalent coordinating salt. Claims 30-35 are dependent upon new independent claim 29. New independent claim 36 is similar to independent claim 29, but further specifies the amounts for the high molecular weight acidic polymer and coordinating salt.

In considering the claims now presented, Applicant would have the Examiner consider the remarks that follow:

I. Rejections Under 35 U.S.C. §112

A. Rejection Under 35 U.S.C. §112, First Paragraph

The Examiner had rejected claims 1-17 and 20-21 under 35 U.S.C. §112, first paragraph, because, as the Examiner states, "the specification..., does not reasonably provide enablement for a foam concentrate that does not contain any foaming agent (i.e. foam forming surfactant)."

Applicant has now amended independent claim 14 to specify that the fire fighting composition contains a hydrocarbon surfactant. As discussed over the phone, Applicant

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submits this should address the Examiner's objections with respect to enablement. Such hydrocarbon surfactants are described in Applicant's specification, for instance, at paragraph 0026. The remaining claims should also be acceptable with respect to this objection.

**B. Rejections Under 35 U.S.C. §112, Second Paragraph**

The Examiner had also rejected claims 1-17 and 20-21 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, with respect to claims 1-17 and 20-21, the Examiner contends that the claims are indefinite with respect to the metes and bounds as to the phrase "high molecular weight" in regards to the required acidic polymer.

Applicant has amended claim 14 to specify that the high molecular weight acidic polymer (HMWAP) has an average molecular weight of from 5000 g/mol or greater. As discussed over the phone, Applicant submits that this should address the Examiner's objections with respect to indefiniteness.

Applicant has also amended the preamble of dependent claim 21 to be drawn to the composition.

The remaining claims should also be acceptable with respect to 35 U.S.C. §112, second paragraph.

**II. Rejections Under 35 U.S.C. §102/§103**

In the remarks section of the Office Action of August 26, 2005, the Examiner had stated that Applicant's claims 1-13 and 20 were directed to a concentrate that can be subsequently be used to make a fire fighting composition and that there was no requirement that the performance requirements for a fire fighting composition has to be disclosed by the prior art. In an effort to advance the prosecution of the present application, Applicant has now canceled those claims directed to a concentrate. The remaining pending claims are all directed a fire fighting composition.

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A. Rejection Under 35 U.S.C. §102(b) – Chen et al. or Galleguillos et al.

The Examiner had rejected claims 1-5, 7-17 and 20-21 as being anticipated under 35 U.S.C. §102(b) by Chen et al. (U.S. Patent No. 4,284,517) or Galleguillos et al. (U.S. Patent No. 6,361,768).

With respect to Chen et al., this reference fails to disclose each and every element of Applicant's claimed invention and thus fails to anticipate or render Applicant's claimed invention obvious. Chen et al. is directed toward a method of treating a subterranean formation. In the cited Tables IIIB and IV of Chen et al. that specify particular amounts of polymer and aqueous brine, no separate hydrocarbon surfactant is used. Hydrocarbon sulfonates or petroleum sulfonates are described in Chen et al. as being optional (see, for example, column 14, lines 2, etc.). The cited example of Figure 1 of Chen et al., which does employ a petroleum sulfonate anionic surfactant, utilizes distilled water (see column 11, lines 27-32), with no divalent ion or coordinating salt stated as being present such that it meets all the limitation of amended claim 14 and the remaining claims.

Furthermore, the performance criteria of Applicant's claims are not inherently met by the compositions of Chen et al. The Examiner had previously acknowledged that Chen et al. failed to expressly teach or suggest Applicant's claimed performance limitations. In continuing the rejections on these references, however, the Examiner had stated that Applicant had failed to show any proof that the compositions taught by the prior-art patents do not inherently meet Applicant's claimed limitations.

Applicant respectfully submits that the claimed characteristics of the fire fighting compositions are not inherent in the compositions of Chen et al. First, because the specific examples lack all the claimed components of a high molecular weight acidic polymer ("HMWAP"), a hydrocarbon surfactant and a coordinating salt, Applicant submits that they could not meet the claimed UL 162, Class B performance criteria for AFFF agents and FP agents. Furthermore, Applicant submits that the claimed performance is not met by the compositions generally described in Chen et al. From its own examples, Applicant has demonstrated that the claimed characteristic of not forming a stable seal on cyclohexane while still meeting the specified UL 162 Class B

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performance criteria for AFFF agents or FP agents is not a characteristic that is necessarily present in compositions employing high molecular weight acidic polymers and a coordinating salt. Both the proper quantities and quality of the HMWAP and coordinating salt must be chosen. This is discussed in section 8 of the declaration of Dr. Kirtland P. Clark, previously filed with the response of June 28, 2005. Considering the evidence provided by Applicant's own examples, Applicant respectfully submits that it cannot be said that the compositions generally described in Chen et al., which are directed to a formulation for treatment of a subterranean formation, necessarily provide the claimed characteristics to anticipate or render Applicant's claims obvious.

Accordingly, Applicant's claims should be allowed over Chen et al. for at least these reasons.

With respect to Galleguillos et al., it too fails to disclose each and every element of Applicant's claimed invention and thus fails to anticipate or render Applicant's claimed invention obvious. Galleguillos et al. is directed toward a hydrophilic ampholytic polymer that may be used in shampoos, conditioners and the like.

The Examiner states that the disclosed hydrophilic ampholytic polymer is deemed to read on Applicant's high molecular weight acidic polymers. Further, the Examiner states that Applicant's claims are deemed to be anticipated by Examples 21, 23, 26, 28 and 30, wherein the coordinating salt is for example centrimonium chloride in example 21, dimethyl dialkyl ammonium chloride in example 23, and ammonium laureth sulfate in example 28. The Examiner contends that the performance characteristics of Applicant's claims are deemed to be inherent within the specific examples of Galleguillos et al.

The compositions of Galleguillos et al. differ significantly from those disclosed by Applicant such that they would not necessarily provide the claimed characteristics deemed to be inherent. Two of the cited examples of Galleguillos et al., Examples 21 and 26, utilize a monovalent salt (cetrimonium chloride). According to the declaration of Dr. Clark in Section 8, this monovalent salt would be unsuitable as the coordinating salt. The use of divalent or polyvalent salts as the coordinating salt is discussed in Applicant's specification, for instance, at paragraphs 0014, 0032 and 0033. Applicant submits that the dimethyl dialkyl ammonium chloride of Example 23 and the behentrimonium

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chloride of Example 30 are quaternary ammonium salts that would also constitute monovalent compounds that would be unsuitable as the coordinating salt. Additionally, Applicant submits that the ammonium laureth sulfate of Example 28 constitutes an anionic surfactant and would also be unsuitable as a coordinating salt.

Further, even assuming that the compounds disclosed in Galleguillos et al. were suitable, given the amounts used, these would not necessarily provide the claimed performance characteristics (see declaration of Dr. Clark, Section 8).

Moreover, Applicant has shown through its own examples that the claimed characteristic of not forming a stable seal on cyclohexane while still meeting the specified UL 162 Class B performance criteria for AFFF agents or FP agents is not a characteristic that is necessarily present in compositions employing high molecular weight acidic polymers. Both the proper quantities and quality of the HMWAP and coordinating salt must be chosen. Considering the evidence provided by Applicant's own examples, Applicant respectfully submits that it cannot be said that the compositions described in Galleguillos et al., which differ significantly in formulation from Applicant's successful examples, necessarily provide the claimed characteristics to anticipate or render Applicant's claims obvious.

For all of the reasons discussed above, Applicant respectfully submits that the pending claims are allowable over Galleguillos et al.

**B. Rejection Under 35 U.S.C. §§102(b) – “Good Chemistry” Webpage**

The Examiner had rejected claims 1-5, 7-17 and 20-21 as being anticipated under 35 U.S.C. §102(b) by the publication entitled “Good Chemistry has never been so bad for fire!”, found at [www.chemguard.com/home/corporate\\_body\\_foam\\_story.html](http://www.chemguard.com/home/corporate_body_foam_story.html), which is cited as directly teaching an aqueous concentrate comprising the CHEMGUARD HS-100 product.

The Examiner asserts that the CHEMGUARD HS-100 is deemed to anticipate Applicant's claimed composition. The Examiner states that the CHEMGUARD HS-100 is deemed to contain some coordinating salts in their make up such that the composition would inherently provide the claimed performance.

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As set forth in the declaration of Dr. Clark at Section 10, there is no polyvalent coordinating salt in the CHEMGUARD HS-100 that would provide the claimed fire fighting performance. Furthermore, Applicant's own examples, which actually utilize CHEMGUARD HS-100, were not successful in all instances even when a suitable coordinating salt was used. The CHEMGUARD HS-100 therefore could not inherently meet the claimed performance criteria.

Applicant respectfully submits for at least these reasons the claims rejected on the Chemguard, Inc. webpage discussing the CHEMGUARD HS-100 product should be allowed.

C. Rejections Under 35 U.S.C. 103(a)

The Examiner has also rejected claims 1-17 and 20-21 as being obvious under 35 U.S.C. §103(a), based upon the primary references Chiesa, Jr. (U.S. Patent No. 4,060,489), Chiesa, Jr. (U.S. Patent No. 4,387,032), Chiesa, Jr., et al. (U.S. Patent No. 4,464,267), Jackovitz et al. (U.S. Patent No. 3,422,011), Tsuji (U.S. Patent No. 4,306,979), Ferguson et al. (U.S. Patent No. 3,457,172) or Kroke et al. (U.S. Patent No. 3,579,466), all individually in combination with the secondary reference entitled "Good Chemistry has never been so bad for fire!", that was listed as being found at [www.chemguard.com/home/corporate/body\\_foam\\_story.html](http://www.chemguard.com/home/corporate/body_foam_story.html).

In continuing the rejection of Applicant's claims, the Examiner states that the fact that the references do not mention Applicant's tests is deemed to be moot since the disclosed foam concentrates are deemed to inherently meet one or more of these tests when used according to the disclosed process.

As discussed above, the CHEMGUARD HS-100 does not provide any suitable coordinating salt that would provide the claimed performance characteristics. Further, to achieve the properties that are deemed to be inherent in the combination of references, the proper quantities and quality of HMWAP and coordinating salt must be used. The combination of references cited by the Examiner do not provide such information such that the performance characteristics are necessarily present or would be apparent to those skilled in the art. This is discussed in Dr. Clark's declaration at Section 11.

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Additionally, Applicant's own examples demonstrate that merely combining HMWAP and a coordinating salt does not necessarily provide the claimed characteristics, as not all of Applicant's examples provided the claimed performance. It is even less likely that the claimed characteristics would necessarily be present in the theoretical compositions derived by the cited combinations to conclude that the claimed characteristics are inherent. Accordingly, Applicant respectfully submits that the cited combinations fail in establishing a *prima facie* case obviousness.

For at least these reasons, Applicant respectfully submits the presently pending claims are allowable over the cited combinations.

### III. Conclusion

In view of all of the reasons presented above, Applicant submits that the application is in a condition for allowance. Favorable action is therefore respectfully requested.

If any extension of time is believed necessary, however, such extension is hereby requested. If any fees are deemed necessary for the continued prosecution of the present application, the Commissioner is hereby authorized to charge them to Deposit Account No. 50-1899.

Please contact the undersigned at the address or telephone number listed below should there be any questions, or if contacting the undersigned would expedite or aid the examination or prosecution of this application.

Date: October 19, 2005

Respectfully submitted,

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